
Title: C4-IT 02-005 Workshop on Commercial Information Technology for Military Operations (CITMO 2002)

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Keywords

Commercial Information Technology
Information Assurance
Information Security
Information Technology
Mobile Communications
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Technology Insertion

Summary

CITMO 2002 was held in Ostersund, Sweden, during 11-13 June 2002. It was an effort organized by the Independent Development Group, Europe, the Jamtland Rifles Regiment of the Swedish Defense Forces, the Mid-Sweden University, the Office of Naval Research International Field Office, and the US Air Force European Office of Aerospace Research and Development. It provided the opportunity for people from the military, government, and commercial sectors to gather and discuss areas of mutual interest regarding the use of commercial information technology in a variety of military contexts.

The operational context was focused mainly on humanitarian relief operations and operations at relatively low level of conflict, but the discussions provided a basis for much more extensive uses of commercial technologies combined with military systems. This workshop proved to be extremely useful from a number of perspectives.

- It provided a venue for the exchange of ideas among people who had never before been in contact with one another.
- Presentations and discussions covered a wide range of topics and provided insights into concepts, approaches, products, and organizations that could lead to collaboration to achieve common objectives.
- Discussions in the working groups and in the Plenary Session identified a number of opportunities and issues related to the ability of commercial technologies to be inserted into military operations and systems.

The discussions provided an exchange of information across organizations that had limited prior understanding of one another. This included not only the interaction between military and commercial organizations, but also between the commercial organizations themselves. Also, the potential commercial applicability of military-sponsored R&D became clearer, and the potential cooperative sponsorship of R&D was discussed.

For further information or to obtain a full set of proceedings, refer to the CITMO web site at <http://citmo.net> or contact Mr. Goran Johnson at g.johnson@idgeurope.com

Agenda

Introductory Remarks and Presentations

Welcome by Chairman: Mr. Goran Johnson, IDG Europe

Welcome on behalf of the regiment: Col Brannstrom, CO Jamtland Rifles Regiment

Welcome on behalf of Ostersund: Mr. Jens Nilsson, Mayor

Administrative remarks: Ms. Louise Yuen, IDG Europe

Introduction - The Importance of Commercial Information Technology for Military Operations:
BG Hakan Espmark, CINC First Army Division, Swedish Forces

A View of the US Army's Approach to Network Centric Warfare: Mr. John Cittadino, President, JCC Technology Associates, former member of the Army Science Board, former Director for Theater and Tactical C3 in the Office of the Secretary of Defense

Motivation and Overview for the Workshop – The Military Customer in the Global Information Infrastructure: Dr. Howard Marsh, Associate Director for C4 Information Technology, US Office of Naval Research International Field Office

Session 1: Military Concepts and Information Technology: Col A. Brannstrom, Chairman

The Challenges of Applying Information Technologies to Transform the Force: Mr. Wayne Perras, Technical Director, Naval Warfare Development Command

The Royal Navy's current and predicted Network Enabling Capability (NEC) for use within Maritime Strike and Littoral Manoeuvre: Captain Jim Dale, Royal Navy, DACOS C4 CM(OPS) CinCFleet

Lunch & Presentation - Swedish Concepts for the Revolution in Military Affairs: Major Lindberg, Swedish Military HQ

US Air Force Vision for Information Technology to Support the Forces: Dr. Northrup Fowler, Chief Scientist, Information Directorate, Air Force Research Laboratory

Commercial Information Technology's Role in Shaping the Joint Battlespace Infosphere: Mr. Richard C. Metzger, JBI Program Manager, Information Directorate, Air Force Research Laboratory

Distributed Agent Collaboration in Realistic Coalition or Multi-Domain Enterprises: Dr. Michal Pechoucek, Czech Technical University in Prague

Adapting Commercial Technology for Military Applications: Mr. Lennart Kalkvist, Saab Systems

Session 2: Commercial Communication/Networking Systems and Services: Dr. H. Marsh, Chairman

3G and Beyond: Mr. Lars Brindt, Ericsson Research

Managing QoS and Info Assurance in a Multi-Domain Environment: Prof. Laurie Cuthbert, Queen Mary, University of London

The Commercial Telco View of the Future: Dr. Ulf Nilsson, Telia Research

GSM-R: The Technology and its Applications: Mr. Ola Bergman, Siemens AG

GSM in support of military operations: Mr. Per Unell, Sectra

Mobile Communication via Inmarsat – Global, Secure and High Bandwidth Connections: Mr. Paul Branch, Inmarsat

Session 3: Computing in the Global Mobile Subscriber Environment: Mr. G. Johnson, Chairman

Personal Computing Equipment: Dr. Mark Smith, Hewlett Packard Labs

Secure/Robust Windows CE: Mr. David Ladd, Microsoft

COTS and Military Mobile Computing: Mr. Paul Shreve, Cisco Systems

COTS-based Wireless Services Tailored for Users on the Move - Challenges and risks: Dr. Christian Jönsson, Swedish Defence Research Agency – FOI

Session 4: Information Assurance: Dr. C. Reuter, Chairman

Advanced Technology for Information Security and Assurance: Dr. John McLean, Superintendent, Information Technology Division, Naval Research Laboratory

The Survivable Global Information Enterprise: AFRL's Information Assurance Program, Dr. Leonard Popyack, Technical Director, Adversarial Sciences Lab, Information Directorate, Air Force Research Laboratory

Project SAFEGUARD: Robustness in a Complex, Multi-Domain Network:
Dr. Wes Carter, Queen Mary, University of London

Information Assurance for Electronic Commerce: Mr. Thord Axelsson/Mr. Evald Persson, Sweden Post

Working Groups - Theme: Technology

- Networking
- Computing Hardware and Software
- Security and Information Assurance

Working Groups - Theme: Operations and Technology Insertion

- Coalition Operations and Commercial Technology
- Opportunities for Experimentation and Commercial Technology Insertion
- R&D Issues to Adapt Commercial Systems/Services to Military Needs

Plenary Session

- Working Group Outbriefs
- Panel Discussion of Major Findings, Conclusions, Recommendations
- Discussion of Way Ahead: Major Opportunities, Issues, and Objectives

Conclusion/Finding

CITMO 2002 provided the opportunity for people from the military, government, and commercial sectors to gather and discuss areas of mutual interest regarding the use of commercial information technology in a variety of military contexts. The focus was mainly on humanitarian relief operations and operations at relatively low level of conflict, but the discussions provided a basis for much more extensive uses of commercial technologies combined with military systems. This workshop proved to be extremely useful from a number of perspectives.

This workshop enabled the exchange of ideas among people who had never before been in contact with one another. These new contacts included ones within the commercial sector and within the military sector as well as across the sectors. The presentations and discussions covered a wide range of topics and provided insights into concepts, approaches, products, and organizations that expanded perspectives and understanding of all the participants. The presentations included overviews and some detailed discussions that gave the participants an understanding of the emerging technologies as well as an appreciation for the specific capabilities and features that were needed in military systems. Commonality and important distinctions in the requirements of the military and commercial users were evident in these

presentations. This allowed the individual working groups to deal with both the opportunities and issues related to the use of commercial and military information technologies to support a wide range of military operational needs.

The most important result was the assembly of a group of experts from the various disciplines and organizations, which generated a number of informal collaborations that are certain to lead to cooperative efforts across military and commercial organizations. By the time the formal meetings were concluded, several of these collaborations had already been established, and follow-on work was being discussed.

The delegates endorsed value of the CITMO effort and agreed that a second workshop should be planned for next year. They also agreed that the next workshop should define a specific operational problem (or problem area) as its focus and then aim for specific IT alternatives that could be evaluated against specific tradeoff factors. They agreed that the general scope of this first workshop was appropriate for an initial phase but that continuation with this broad a scope would not be as productive as a more directed effort to develop specific evaluations and recommendations for real-world alternatives.

CITMO 2003 will be planned for the Spring or Summer of 2003.

I won't burden you with another copy of that file. I just want to make a change in the contacts section before it goes to press. I want to delete the e-mail addresses for the contacts since we are trying to keep their addresses and phone numbers in confidence. I'll give their names and organizations, but nothing else. I will simply refer to Goran Johnson as the point of contact who can provide further means to reach these people on a case by case basis. This was decided as the way to publish the delegate list in the proceedings, so I want to do the same thing in any public posting if that's OK with you and Mike. If it's not, I'll just trim the list to the few people who don't mind having their information broadcast to the world.

Howie

Contacts

More than 60 delegates participated in the workshop. They are identified on the web site listed above. Further contact information for the delegates can be obtained from Mr. Goran Johnson. The following are key points of contact for further discussions.

Allen, Col. Bernal
US Marine Corps Systems Command

Branch, Mr. Paul
Inmarsat

Bengtsson, Mr. Christopher
Swedish Defence Material Administration

Brännström, Colonel Anders
Jämtlands Rifles Regiment

Bergh, MG(r) Svante
Ericsson

Cittadino, Mr. John
JCC Technology Associates (Ericsson)

Bergman, Mr. Ola
Siemens

Coomes, CDR Michael
US Office of Defense Cooperation,
Stockholm

Cuthbert, Prof. Laurie
Queen Mary, University of London

Dale, Captain Jim
Royal Navy CINCFLEET DACOS CIS

Espmark, BG Håkan
Swedish Army

Fowler, Dr. Nort
US Air Force Research Laboratories

Hedenstad, Ole-Erik
Norwegian Defense Research Institute (FFI)

Johnson, Mr. Göran
IDG Europe

Jönsson, Dr. Christian
Swedish Defence Research Agency (FOI)

Källqvist, Mr. Lennart
Saab Systems

Ladd, Mr. David
Microsoft Research

Lange, Mr. Anders
Ericsson

Logan, Col. Robert
US Navy/Marine Corps Intranet (NMCI)

McCune, Dr. Brian P.
Cyladian Technology Consulting -
(DARPA/IXO)

Pechoucek, Dr. Michal
Czech Technical University, Prague

Perras, Mr. Wayne
US Naval Warfare Development Command

Persson, Mr. Evald
Posten (Swedish Post)

Qvist, Mr. Peder
Swedish National Police Board (RPS)

Reuter, Dr. Chris
US European Office of Aerospace R&D

Shreve, Mr. Paul
Cisco Systems

Slade, MAJ W. Collier
US Office of Defense Cooperation, Prague

Smith, Dr. Mark
Hewlett-Packard Laboratories (Palo Alto,
California)

Unell, Mr. Per
SECTRA Communications

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